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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,153	03/07/2006	Willibald Schurz	078857.0168	3418
31625 7590 12/23/2008 BAKER BOTTS L.L.P. PATENT DEPARTMENT 98 SAN JACINTO BLVD., SUITE 1500 AUSTIN, TX 78701-4039			EXAMINER ROSENAU, DEREK JOHN	
			ART UNIT 2834	PAPER NUMBER
			MAIL DATE 12/23/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,153

**Applicant(s)**

SCHURZ ET AL.

**Examiner**

Derek J. Rosenau

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 8-15 and 17-21 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14, 15, 17-19 and 21 is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 13 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/4/08 has been entered.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 5 recites the limitation "the first contact surfaces" and "the second contact surfaces". There is insufficient antecedent basis for these limitations in the claim.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-4, 6, 8, 13, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinz in view of Schurz et al. (US 7259504) and Schuh et al. (US 6316863).

5. With respect to claim 1, Heinz discloses a piezoactuator (Figs 1-8) comprising a piezoceramic (item 1) which can expand when a voltage is applied (column 1, lines 24-27) and contacting elements (item 5) which rest against the piezoceramic (Figs 1-8), wherein the contacting elements are formed as profiled sheets which have contact surfaces formed in a surfaces and on one edge of each profiled sheet spaced at intervals from one another (Figs 1, 3, and 5-8). As the contact surfaces of Heinz extend from both edges of the profiled sheets, they extend from both one edge and the edge opposite the one edge.

Heinz does not disclose expressly that the profiled sheets are fixed to an external surface of a plastic cage and the piezoceramic is positioned in a cavity of the plastic cage.

Schuh et al. teaches a piezoactuator in which the piezoceramic is positioned in a cavity (Fig 8) of a plastic cage (column 5, line 66 through column 6, line 11).

Schurz et al. teaches a piezoactuator (Figs 3 and 5) in which profiled sheets (item 6) are fixed to an external surface (Fig 3) of a cage material (item 14) formed around the piezoceramic (Fig 5).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine the plastic cage of Schuh et al. and the externally connected profiled sheets of Schurz et al. with the piezoactuator of Heinz for the benefits of better protecting the piezoceramic from damage (column 5, line 66 through column 6, line 11 of Schuh et al.) and reducing the amount of space required for the device (column 4, lines 14-16 of Schurz et al.).

6. With respect to claim 2, the combination of Heinz, Schuh et al., and Schurz et al. discloses a piezoactuator according to claim 1. Heinz discloses that the profiled sheets are bent (Figs 1, 3, 5, 6, and 8).

7. With respect to claim 3, the combination of Heinz, Schuh et al., and Schurz et al. discloses a piezoactuator according to claim 1. Heinz discloses that the profiled sheets are bent such that the contact surfaces press with a predetermined force on the piezoceramic to form an electrical contact (Figs 1, 3, 5, 6, and 8).

8. With respect to claim 4, the combination of Heinz, Schuh et al., and Schurz et al. discloses a piezoactuator according to claim 1. Heinz discloses a metallization (item 3), against which the contact surfaces rest on the piezoceramic (Figs 1-8), wherein the contact surfaces are fixed relative to the contact surfaces of the metallization in such a way that, when the piezoceramic is axially deflected, no frictional relative movement occurs between contact surfaces and metallization (Figs 1-8).

9. With respect to claim 6, the combination of Heinz, Schuh et al., and Schurz et al. discloses a piezoactuator according to claim 5. Heinz discloses that the contact surfaces of the two contact tracks extend in the longitudinal direction of the piezoceramic (Figs 1, 3, and 5-8).

10. With respect to claim 8, the combination of Heinz, Schuh et al., and Schurz et al. discloses a piezoactuator according to claim 1. Schurz et al. discloses that the profiled sheets are fixed to fixing points of a cage (Figs 3 and 5). Schuh et al. discloses that the cage is a plastic cage (column 5, line 66 through column 6, line 11).

11. With respect to claim 13, the combination of Heinz, Schuh et al., and Schurz et al. discloses a piezoactuator according to claim 4. Heinz discloses that the metallization is running laterally along the piezoelectric longitudinal axis (Figs 1, 3, and 5-8).
12. With respect to claim 20, the combination of Heinz, Schuh et al., and Schurz et al. discloses a piezoactuator according to claim 1. The claim language "wherein the profiled sheets are caulked to fixing points of a plastic cage" is a product-by-process limitation. It has been held that if a product in a product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product is made by a different process (*In re Thorpe*, 227 USPQ 964).

***Allowable Subject Matter***

13. Claims 14, 15, 17-19, and 21 are allowed.
14. The following is an examiner's statement of reasons for allowance: the prior art does not disclose or suggest "profiled sheets each comprising a surface having opposing edges, wherein one edge of the opposing edges of the profiled sheet there are first and second contact surfaces formed in said surface spaced at intervals from one another ... wherein the first and second contact surfaces are formed in such a way that the first contact surfaces form a first contact track and the second contact surfaces form a second contact track" in combination with the remaining claim elements of claim 14..

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Response to Arguments***

15. Applicant's arguments, see amendments/arguments, filed 4 December 2008, with respect to claims 14, 15, 17-19, and 21 have been fully considered and are persuasive. The 35 U.S.C. 102 and 103 rejections of claims 14, 15, 17-19, and 21 have been withdrawn.

16. Applicant's arguments filed 4 December 2008 have been fully considered but they are not persuasive. Applicant argues that none of the cited art discloses that the contacting elements are formed as profiled sheets which have contact surfaces formed in a surface and on one edge of each profiled sheet and spaced at intervals from one another. However, while the contact surfaces of Heinz extend from both edges of the profiled sheets, the claim does not require that the contact surfaces are on only one edge of the profiled sheets. Therefore, the contact surfaces of Heinz are formed on both the one edge of the profiled sheet and the edge opposite the one edge.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek J. Rosenau whose telephone number is (571) 272-8932. The examiner can normally be reached on Monday thru Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leung Quyen can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quyen P Leung/  
Supervisory Patent Examiner, Art Unit 2834

/D. J. R./  
Examiner, Art Unit 2834